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The Beacon

BY AND FOR EMERGENCY RESPONDERS

PSYCHOLOGICAL EFFECTS OF WEAPONS OF MASS DESTRUCTION

By Marion C. Warwick, M.D., M.P.H.

In order to develop effective response plans, it is critical to appreciate the potential for terrorist events involving weapons of mass destruction (WMD) to cause large numbers of casualties, perhaps in the thousands. As chilling as these numbers might be, the victims themselves would not necessarily be the only target of a terrorist attack. Discussion about preparation for the effects of WMD terrorism has been focused on the recognition and treatment of physical casualties, but should also focus on the profound psychological effects that a mass casualty event would have on individuals, communities, and the nation. This article describes the care and prevention of psychological distress related to a mass casualty event which were discussed at a conference entitled, "The Operational Impact of Psychological Casualties from Weapons of Mass Destruction", sponsored by the Armed Forces Radiobiology Research Institute in Bethesda, Maryland, July 25-27, 2000.

First, for appropriate care, psychological victims need to be considered in planning. Postulating the numbers of mass casualty victims based on estimates of physical injuries or illness alone is not adequate for appropriate response planning. Judging from past occurrences of terrorist events, experience has shown that there may be anywhere from 4 to 20 psychological victims for every physical victim in a mass casualty event. A particularly striking example occurred following a recent radiological incident in Goiannia, Brazil, in which 250 persons were actually exposed to a radioactive substance. Of the first 60,000 who sought medical care when the incident became known, 5,000 were unexposed but developed physical symptoms such as nausea and skin rashes mimicking symptoms of radiation exposure. A total of 125,000 people (12.5% of the population) requested screening for radiological contamination, providing a 500 to 1 ratio of patients screened in the medical system to patients with any sort of radiological contamination. Some of the factors which have been associated with an increased number of psychological casualties are:

- Number of physical casualties (This is highly correlated with psychological victims. The greater the number physical casualties, the greater the number of psychological casualties.)
- Lack of general knowledge about the cause
- Physical proximity to location of event
- Increased publicity and media coverage afterwards keep the event focused in the communities minds.

Careful estimates of the numbers of victims needing medical care, and what kind of care they will need, will be valuable for effective consequence planning.

While physical effects of various terrorist agents have been widely discussed, the psychological effects have not been so frequently considered. For individual patients, psychological effects can be described on a spectrum, from "worried well" to "shell shock" victims, literally incapacitated from psychological stress. Other syndromes include becoming accident-prone, developing unexplained physical symptoms, or behavioral and conduct disorders.

For those taking care of victims of a mass casualty incident, differential diagnosis is neither trivial nor easy. Psychological victims can manifest real physical symptoms such as rashes, vomiting, etc., for which the cause is not always easily distinguished. Casualties

with physical injuries may also have psychological symptoms. Whether symptoms are of physical or psychological origin, the pain and distress are real and must be treated. Each patient must be evaluated individually and carefully, and their concerns taken seriously. Establishing trust is critical. If patients have to prove they are ill, they can't get well.

Persons responding to a mass casualty event may also become psychological casualties. Measures to mitigate psychological stress among responders include getting enough sleep at night, decreasing unnecessary exposure to the dead and ill, debriefing responders, and identifying high risk individuals. Signs to look for are "avoidance" and "numbing", that is someone who goes out of their way to avoid thinking about the incident, has an inability to feel emotions, and feels that the future is so hopeless there is no sense in thinking about it. Affected individuals should have a short respite, and then a prompt return to duty without labeling them with a psychiatric diagnosis. It is important that first responders understand the warning symptoms of psychological distress, both for themselves and for appropriate care of the general public.

Provisions for psychological care will be important, relative to the potentially large number of psychological victims. Among other things, interventions include restoration of an effective social role and return to usual sources of support. Different forms of debriefing may be of use in the prevention and treatment of psychological casualties, but the effectiveness of debriefing has still not been proven by research studies. Debriefing may involve groups of responders or casualties sorting out what happened so that everyone gets the overall picture. Debriefings do not necessarily involve individuals talking about their feelings. A system for long term follow-up of patients is helpful. It is a way of saying to them, "We won't forget you". Japan has instituted yearly physicals for those involved in the Sarin gas incident including access to education on post traumatic stress disorder, counseling, and support groups.

Second, psychological effects in the public should be anticipated, and mitigated through an efficient response and accurate reporting. A visibly coordinated and effective response to a terrorist event will be important in preventing or minimizing psychological distress. Organizing this response remains a high priority. Media communications will be a critical element in a mass casualty event. In the case of an event, accurate, up-to-date information should be provided regularly, without conjectures about the future or about information that is not yet available. To facilitate good working relationships, responders should try to acquaint themselves with media representatives in advance, which will also serve to help media personnel become more knowledgeable about the threats posed by weapons of mass destruction. Trust will be an important issue.

In conclusion, the behavioral health consequences of a mass casualty event may well be the most widespread, long lasting, and expensive consequences. Those developing WMD response measures should include psychological casualties in their calculations about the expected numbers of victims to be seen (for both tabletops and practical planning), and plan for psychological counseling as a part of plans for medical care. For prevention of psychological distress, continued efforts to develop effective response plans are critical. Media staff who have some prior knowledge about mass casualty terrorism events would be better prepared to provide accurate media coverage in a way that minimizes its negative psychological impact on the public. Members of the public with prior awareness of potential terrorist events would also be in a better position to handle consequent psychological stress.

Marion Warwick is a medical epidemiologist in the Emergency/Terrorism Response Unit of the Missouri Department of Health. A family practice physician with post graduate training in epidemiology, she has focused for the past five years on communicable disease control in the public health setting. Please address correspondence to: Dr. M. Warwick, Emergency/Terrorism Response Unit, Missouri Department of Health, 912 Wildwood, Jefferson City, MO 65102; fax 573-751-6041; e-mail: warwin@mail.health.state.mo.us.

For more information relating to mental health issues in disasters, visit the following websites:

http://www.mentalhealth.org/cornerstone/Keyword2.cfm?Keyword=Disaster+Relief

http://www.samhsa.gov/centers/cmhs/cmhs.html

http://www.redcross.org/services/disaster/

http://www.apa.org/practice/drnindex.html

http://www.psych.org/pract_of_psych/disaster_psych.cfm

This article is a condensed overview of an outstanding conference, as seen through the notes and interpretations of the author. The author would like to gratefully acknowledge the assistance of LTC Ross Patel, conference organizer, for reviewing this article. A similar article has been previously published in the *Missouri Epidemiologist*, September-October 2000, page 15.

FBI PSYCHIATRIST URGES COLLEAGUES TO PREPARE TO AID TERRORISM VICTIMS

By Eve Kupersanin

Editors Note: This article is reprinted from the July 20, 2000, Psychiatric News with permission.

Biological, chemical, and radiological attacks are characterized by invisibility, psychiatrist Dickson Diamond, M.D., said at APA's 2000 annual meeting in Chicago in May. After exposure to a biological agent, for example, a victim may not experience symptoms for a few days or even weeks.

"These types of terrorist attacks will leave no evidence of destruction or other tell-tale signs, and victims will not be easily identified. As a result, there won't be a traditional response from emergency medical services to the scene of an attack, and the origin of the attack will be unknown. People won't know whether they are a victim or note, and this will open up a door for vast numbers of psychogenic casualties," he explained.

Such an attack occurred when Sarin, a potentially deadly chemical agent, was released on a Tokyo subway in 1995. While more than 5,000 people sought medical treatment at Tokyo hospitals, only 1,000 were actually exposed to the toxin, demonstrating the great psychological impact of such an attack.

Diamond is chief psychiatrist for the FBI and medical consultant to its National Domestic Preparedness Office. One of his jobs is to raise awareness among physicians, including psychiatrists, and mental health professionals about their roles in providing assistance to victims of a biological, chemical, or radiological domestic attack.

Where Were the Psychiatrists?

Diamond attended one recent mock terrorist attack in Washington D.C., as an observer on behalf of the FBI. Mock attacks were also staged in Denver and Portsmouth, N.H. These attacks simulated the use of chemical, biological, and radiological agents. The Washington D.C., exercise, dubbed "Top Off," tested decision-making skills of top federal officials in a domestic terrorist attack.

While there were physicians standing by to help victims, there were no psychiatrists or mental health professionals on hand, Diamond noted. He believes that they have been left out of government-response plans because the focus of those plans has been on treatment of physical casualties.

"There has been no appreciation for the fact that the majority of victims will be psychogenic," he commented.

Mental health care is the key to preventing mental health problems after an attack. "You can't prevent the attack or prevent the physical casualties, but you can mitigate the psychological casualties, who have the potential to be the largest group of affected individuals," emphasized Diamond.

Only when psychiatrists have an understanding of chemical, biological, and radiological agents - in terms of, for example, the symptoms they produce, course of illness, communicability, toxicity, and treatment - can they provide effective intervention.

In the event that hundreds or thousands of people are exposed to an unknown terrorist agent in the future, they will be brought to local hospitals. As media spread the news about the attack, there is a good chance that hospital personnel will become alarmed. Diamond emphasized that informed mental health professionals will be in a prime position to quell those fears and end a spreading panic.

A real-life instance of mass panic occurred when the Washington D.C., headquarters of B'nai B'rith was the setting for a 1997 terrorist scare in which 100 people were affected, including 17 people who were hospitalized and one person who suffered a heart attack. A broken petri dish labeled to indicate that it contained anthrax was delivered by mail, but the package was determined to be a hoax. The would-be

terrorist inflicted a tremendous amount of damage without even having to release the deadly agent.

Training Needed

What types of skills should psychiatrists be trained to use in their treatment of victims of biological, chemical, or radiological attacks? Diamond insists that psychiatrists be able to make a differential diagnosis. Since victims show up in emergency rooms as they develop symptoms, and because the symptoms' origin is mysterious, psychiatrists can play a key role in differentiating true exposure to the agent from psychogenic reaction.

In a chemical, biological, or radiological attack, the duration of the psychological aftermath persists long after the actual event has ended, with the emergence or re-emergence of psychological or physical symptoms down the road.

"Entire communities can be stigmatized by such attacks. Trained psychiatrists and mental health professionals can respond to the need for long-term counseling while providing relief from stigma," observed Diamond.

DEPARTMENT OF DEFENSE FORCE PROTECTION EQUIPMENT DEMONSTRATION III 8-10 MAY 2001

The Joint Staff, in conjunction with the Office of the Under Secretary of Defense for Acquisition and Technology (OUSD A&T), the Joint Non-Lethal Weapons Directorate, the National Institute of Justice, and the Department of Energy, is hosting Force Protection Equipment Demonstration III (FPED III), 8-10 May, 2001, at the Quantico Marine Corps Base, Virginia. The U.S. Army Product Manager, Physical Security Equipment (PM-PSE), Fort Belvoir, Virginia, is coordinating the demonstration of state-of-the-art commercial off-the-shelf (COTS) components and systems to DoD, federal department and agency, state and local law enforcement and other first responders, and corrections agency decision makers responsible for force protection. FPED II, 3-6 May 99, attracted 366 U.S. and foreign vendors with over 1000 items of antiterrorism/force protection COTS equipment for demonstration for over 4000 attendees.

FPED III will showcase blast protective barrier systems and windows, personal protective equipment, explosive ordnance disposal equipment, unattended ground sensors, ballistics mitigation equipment, night vision devices, first-responder equipment, unmanned aerial vehicles, and waterside security equipment among others. Blast/ballistics, non-lethal, night vision and biometrics demonstrations will be highlighted.

Persons with responsibility for force protection are encouraged to attend and see firsthand the latest technological innovations from industry. FPED III is not open to the general public and requires pre-registration. Persons desiring to attend may register on-line at http://www.monmouth.army.mil/smc/pmpse/fped.

Guest Editorial

LEARN FROM THE PAST TO PROTECT US IN THE FUTURE

By *Michael J. Fagel, Ph.D., CEM*

Welcome to 2001
The role of the emergency manager has changed somewhat over the years, BUT the basics are still the same.

The EMA manager, director, coordinator is that of a TEAM builder. It is NOT the role of that person to "take over" the operation, but that of a resource that may be utilized by all of the command staff, to assist in the overall planning and eventual mitigation and recovery of the event.

EMA has known many names since the old "Civil Defense" days (yes, I still have MY helmet). We have become known as the all risk planning arm of most municipal and county governments.

All risk is just that, but, over the years, we have added new dimensions to the mix, that is of the new acronym in town, "WMD," Weapons of Mass Destruction.

In most states, there is a defined basic time frame when historically natural events may occur; there is the start of "Tornado" season, the start of

"Hurricane Season," and other factors with which we have begun planning for.

The new risk on the scene is "WMD," which has NO season, and we must begin gearing up NOW, as we really don't know where or when the next event will take place. Fall of 2000, The USS Cole in Yemen, April 1995, Oklahoma City Bombing, February 1993, World Trade Center Attacks. Where will it happen next?

Planning for the next big one requires a look at what has happened in the past.

The concept of all risk planning requires a complete look at as much as possible. It has been said that our view must be wider than normal, much like parents, we need eyes in the back of our heads to take in the whole view, often times we get "tunnel vision" and forget or can not see what is around us. Some of our best views come from 360 degrees view all around us. Preparation before the event requires a plan that involves the entire team. Team members must be convened from all disciplines, and MUST be ready to be fully engaged in emergency planning.

Our mission is to serve the citizens, but our goal is to also serve our community officials by providing them with the best information and planning available. Remember, planning is a CONTINUOUS process that is ALWAYS evolving, and reflects the need of the community.

Occasionally, we may not please everyone involved, BUT we must do the best we can for the largest group. In most states, the ultimate authority rests with the chief elected official in the community. It remains our goal to serve the needs of all. We must always focus on the goal of preparation, planning and mitigation, BUT our goals may be modified by the event in progress. We must be flexible and understand that change is inevitable, and we must be flexible. We must not be so focused on the "paper" plan, and loose sight of the end result, which is "planning, mitigation and recovery."

Sometimes our plans need to change as our needs change.

Plans are a blueprint for conditions we are planning for, BUT they may change.

Don't ever not do something because it wasn't in the "Plan."

As events become more complex, our plans will change, our response will change, and our needs will change.

Change is inevitable, GROWTH is optional.

Survival after the impact is based on many factors.

Lets look at several elements that were published in a FEMA document from the 1980's called "CEO's Disaster Survival Kit." This document was prepared with the support of the IAFC and the precursor to the IAEM.

Some elements the mayor or CEO may need to consider include items for IMMEDIATE ACTION

- Establish Contact with the office of Emergency management
- Begin a personal log, confirm what actions were taken and when
- Direct staff to assess the situation, problems and resources needed. Shortfalls and larger policy needs and options
- Convene brief meetings to asses the situation
- Prepare and issue declarations of "Emergency" or "Disaster" as needed. (Ensure that these follow statutory guidelines.)
- Logs of all actions & financial records must be maintained (for potential reimbursement options)
- Open up channels of communications with other officials.

Disasters or other emergencies do not know any barriers, geographical, political or personal. Response staff and & officials may very well have been impacted by the same event. Make sure that family members are kept informed as to the status of their family members involved in the response and recovery efforts.

There have been many occasions where responders have been so involved with the impact of the event personally, that they are unable to cope with the mission.

Critical incidents may cause differing reactions, it is important to make sure that CISD or CISM is involved in support of the staff.

From a personal note, make sure that you consider the needs of all involved. The events may become overwhelming that would not normally cause any distress. I was involved in CISD at the Oklahoma City Bombing in 1995, and, to this day, I can still feel the effects, which have been made a little easier by participating in CISD/CISM.

The key concept here is that of all risk assessment and planning and that of involving a team approach. Reach out across all jurisdictional boundaries, be they geographic or political. There is NO place in our process for turf wars or egos.

So, let's roll up our sleeves for the best overall planning and response we can do, for our citizens we serve, OUR CUSTOMERS!

After all, that's why we're here!

Good luck and good planning!

Michael J. Fagel, Ph.D., CEM is the director of Emergency Management for the Village of North Aurora Illinois, and s a member of the NDPO State & Local Advisory Group in Washington. He is a 25-year veteran of the fire and emergency management services. He serves the International Association of Emergency Managers as the Region V President, as well as a certification commissioner for the CEM commission of the IAEM. In Washington, he also serves the International Association of Fire Chiefs as a member of the terrorism committee, as well as on the state and county terrorism advisory boards. Fagel also is a reservist with FEMA in their Operations Support Directorate, working in the Occupational Safety & Health office. The opinions expressed here in are that of the author alone, and not that of any local state or federal agency or organization. He may be reached at P O Box 209 North Aurora, IL. 60542, 630 897 0555 or at MJFAGEL@aol.com for further clarification.

NATIONAL PLANNING CONFERENCE ON WMD TERRORISM

The National Defense Industrial Association, in conjunction with the InterAgency Board (IAB) for Equipment Standardization and InterOperability, will conduct a National Planning Conference and Exhibition on Weapons of Mass Destruction (WMD) Terrorism Preparedness and Response.

The symposium will include Advanced Studies Seminars and a practical Response Laboratory through exhibits, demonstrations, and on-the-ground observations at the 2002 Winter Olympic site. Meet officials from local, state, and federal government agencies responsible for employing and equipping WMD terrorism response units, and managing the consequences of a chemical, biological, radiological, nuclear, or high-yield explosive release. Learn about the Government's efforts to combat terrorism in the United States, and review the latest technologies, equipment, and professional services available from industry to provide the decisive edge in WMD response operations.

Date: April 30 - May 2, 2001
Place: Sheraton City Centre Hotel, Salt Lake City, Utah
Register at:
http://register.ndia.org/interview/register.ndia?~Brochure~1450

***The Beacon* is published monthly for members of the emergency response community. Please send articles, comments, feedback, and letters to the Information Sharing Team at the address listed below.**

National Domestic Preparedness Office
Thomas G. Kinnally, Administrator
935 Pennsylvania Ave., N.W., Rm. 5214
Washington, D.C. 20535
202-324-9025. Fax: 202-324-2224

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